New Physiological Training Chamber opens at Sonny Carter Training Facility

S99-03597

Shown is a view of the new Physiological Training Chamber housed in the Sonny Carter Training Facility.

IT HAS BEEN used to train all astronauts since the Gemini days, including those who flew during the Apollo Soyuz mission era and aboard the Skylab. Until recently, all space shuttle astronauts trained in it. Astronaut John Glenn has gone through it, as have actors Tom Hanks, Kevin Bacon, Gary Sinese and Bill Paxton. Before it arrived at JSC, World War II cadet pilots trained in it.

University and high school students selected for NASA's Reduced Gravity Student Flight Opportunities Program go through it every year.

It's called the Physiological Training Chamber. Some people know it as the "altitude chamber." It is used to demonstrate the effects of reduced pressure, specifically hypoxia and gas expansion.

Astronauts, staff pilots, and aircrew members who fly aboard NASA aircraft or spacecraft must undergo physiological training before their initial flights and every three years thereafter. Since 1965, they have been trained in the WWII vintage hypobaric training chamber housed in Bldg. 32 at JSC.

After 34 years of service, the old chamber was recently retired. Physiological training is now being conducted in a new chamber in the Sonny Carter Training Facility.

The new chamber was purchased for a fraction of its worth.

Gordon Baty, special projects officer and senior physiological training instructor, knew that military bases across the country were being closed and that their physiological chambers could be reasonably purchased as excess equipment. In March 1993, paying only the $4,000 price of transportation, NASA purchased a chamber that had been in use at a military base in South Dakota.

The chamber remained in storage until January 1997. It was in bad shape after the trip from South Dakota. It was sandblasted, repainted and put into place at the SCTF. A contract was reached with the Air Force Logistics Center to rehab it last August.

The first run with 16 students was conducted in the new chamber on March 2. At that time, all of the physiological training instructors were officially relocated from JSC to the SCTF.

"NASA spent about three hundred thousand dollars for a chamber that is worth about two million dollars," said Baty. "We now have a state-of-the art chamber that has replaced a 1943 Army Air Corps chamber."

The old facility has not seen its final days. It is going to be turned into a research chamber for life sciences.

S99-03598

Dave Carrway, aerospace physiology specialist with the Manned Test Support Group, fits life support equipment on a student.

The Physiological Training Chamber is the only one of its kind that NASA operates. Instructors are responsible for training students from all NASA centers.

Others are also trained in the facility. Test subjects, test conductors and rescue technicians who participate in chamber activities and duties aboard the KC-135 receive training. Also, for the past 30 years, NASA has had an interagency agreement with the Federal Aviation Administration to provide one training class per month for civilian pilots in the Houston area at no charge. Since its inception, about 10,000 pilots have been trained. Civilian pilots will continue to be trained in the new chamber. ■

NASA, Boeing station team receives Space Achievement Award

NASA and Boeing have received two prestigious aerospace awards in the last few weeks: The National Space Club's Nelson P. Jackson Award and the United States Space Foundation Space Achievement Award. Both awards were accepted on behalf of the NASA and Boeing International Space Station teams by Randy Brinkley, departing head of the ISS Program for NASA, and Doug Stone, Boeing's vice president and general manager.

Pictured here, Brinkley, left, and Stone accept the Space Achievement Award in Colorado Springs on April 5 at the 15th National Space Symposium.

"We certainly have faced many challenges along the way and I'm proud to say that we've been able to overcome them all. It hasn't always been pretty and it hasn't been as soon as we would liked to have done it, but if you look up in the heavens, you'll see a new star on the horizon. It's the International Space Station," Brinkley said in accepting the award.

"It's a privilege and an honor to represent the thousands of women and men all over the world who have spent, in some cases, all of their career making your space station a reality," Stone said.

The United States Space Foundation Space Achievement Award is presented annually to an individual, team or organization for lifetime achievement or a landmark technical accomplishment. ■

Photo courtesy of Boeing